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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

**Replacement of Part 90 by Part 88 to
Revise the Private Land Mobile Radio
Services and Modify the Policies
Governing Them**

and

**Examination of Exclusivity and
Frequency Assignment Policies of
the Private Land Mobile Radio Services**

To: The Commission

PR Docket No. 92-235

REPLY COMMENTS

Filed by:

**Industrial Telecommunications
Association, Inc.
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Date: February 12, 1997

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FEDERAL COMMUNICATIONS COMMISSION

S u m m a r y

In these Reply Comments, ITA addresses the various comments and statements submitted in response to its "Proposed Technical Blueprint" for the post-refarming use of the private land mobile radio frequencies in the bands below 512 MHz.

ITA agrees with those commenters who view the Blueprint as a useful first step toward the implementation of the long-awaited refarming initiative.

Among other points, ITA expresses the following views in these reply comments:

first, the private land mobile radio frequencies allocated in the 806-821/851-866 MHz (800 MHz) and 896-901/935-940 MHz (900 MHz) bands are, in effect, already "consolidated"; there has been no discernible harm inflicted on the licensees and users of these frequencies.

second, the basic distinction between the Public Safety and Private Wireless classifications is relatively non-controversial and could be easily implemented. Beyond these two basic classifications, it becomes both difficult and futile to develop meaningful distinctions between different uses.

third, the consolidation of radio services into two pools will not endanger the health or safety of individuals engaged in quasi-public safety activities.

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To: The Commission		

**REPLY COMMENTS
OF THE
INDUSTRIAL TELECOMMUNICATIONS ASSOCIATION**

The Industrial Telecommunications Association ("ITA") hereby files these Reply Comments responding to the comments and statements submitted by interested parties on February 7, 1997 regarding ITA's proposed "technical blueprint."

Background

On January 21, 1997, ITA submitted for review and consideration as part of this proceeding a "consolidated frequency table" for the frequencies allocated to the private land mobile radio services below 512 MHz and an associated list

of recommended frequency limitations.¹ On January 28, 1997, the Commission placed the Blueprint on public notice. Comments responsive to the Blueprint were filed on or before February 7, 1997.

Reply Comments

Twenty parties commented on ITA's Blueprint. Depending on which comments one chooses to believe, the Blueprint is either "an out-of-time attempt to promote adoption of the two-pool consolidation of the private land mobile wireless services"² or "the first step in allowing the Land Mobile industry to move forward with the FCC Refarming initiative and to allow the end users the opportunity to expand and operate systems in a spectrum starved environment."³

ITA obviously gravitates toward the latter view.⁴ We

¹ ITA's proposed Consolidated Frequency Table and accompanying limitations are hereinafter referred to as the "Blueprint."

² Comments filed February 7, 1997 by the Coalition of Industrial and Land Transportation Radio Users, consisting of the American Automobile Association ("AAA"), the American Trucking Associations, Inc. ("ATA"), Forest Industries Telecommunications ("FIT"), the International Taxicab and Livery Association ("ITLA"), and the Manufacturers Radio Frequency Advisory Committee, Inc. ("MRFAC").

³ Comments filed February 7, 1997 by the E.F. Johnson Company.

⁴ E.F. Johnson was not the only commenter to praise the Blueprint. Motorola, Inc. termed the Blueprint "invaluable regardless of how the FCC ultimately decides the consolidation issue." The Personal Communications Industry Association ("PCIA") stated that it "appreciates the effort ... to ease the

believe the Blueprint is a good first step toward the implementation of the long-awaited refarming initiative. As with most "good first steps," however, ITA recognizes that there is room for improvement.

A. The Commission Should Consolidate the Existing Private Land Mobile Radio Services Into Two Pools, Public Safety and Private Wireless.

It is clear from the comments filed that many of the commenters have spent considerable time reviewing the Blueprint in detail and offering thoughtful refinements. Other parties summarily reject the Blueprint because the two-pool consolidation plan does not conform to their preferred view of how radio service consolidation should proceed.⁵

Commission's regulatory burden." Aeronautical Radio, Inc. noted that the Blueprint did not meet all of the needs of aviation, but stated that it was nonetheless encouraged by ITA's proposal. The Affiliated American Railroads commended ITA for taking the initiative in developing the Blueprint and in recommending measures to ensure the integrity and safety of railroad operations.

⁵ One of the parties supporting three pools, UTC, is on record as favoring an approach under which its constituents, members of UTC's so-called "Public Service Category," would be permitted to conduct community repeater-type operations on their licensed frequencies. ITA finds this approach confusing. On the one hand, UTC has cast its "Public Service Category" in a manner that intentionally excludes operators of business and community repeater systems. On the other hand, UTC seeks to accommodate community repeater operations by utilities licensed in the "Public Service Category" -- the same utilities whose admission to the "Public Service Category" was premised on a need for a higher level of spectrum security than community repeaters and other business licensees.

In formulating these Reply Comments, ITA wishes to avoid engaging in a protracted debate regarding the merits of consolidating the existing private land mobile radio services into two pools.⁶ ITA has examined this issue at length in previous filings and sees little benefit in retracing the arguments. It is sufficient, ITA believes, merely to make note of four fundamental points:

first, the private land mobile radio frequencies allocated in the 806-821/851-866 MHz (800 MHz) and 896-901/935-940 MHz (900 MHz) bands are, in effect, already "consolidated"; there has been no discernible harm inflicted on the licensees and

⁶ The American Petroleum Institute ("API"), the Coalition of Industrial and Land Transportation Radio Users ("Coalition"), and the Utilities Telecommunications Council ("UTC") are at odds with ITA on this issue. API believes there should be five service pools, the Coalition favors four, and UTC considers three to be appropriate. Each such proposal implies, in one form or another, a hierarchy of radio services that is dependent on abstract and insignificant distinctions. The comments of the Washington Suburban Sanitary Commission ("WSSC") illustrate the regulatory morass that would be created if the Commission attempts to draw narrowly defined distinctions between essentially similar uses. In its comments, WSSC urges the Commission to restrict eligibility in WSSC's proposed Power Radio Service to "entities responsible for the production and distribution of electricity, and the production and distribution of gas, oil, water, or steam to the public through pipeline only." WSSC would exclude from eligibility entities which are only in the business of either producing or transporting electricity, gas, oil, water or steam. Under WSSC's vision, these excluded entities would default to the "Business/Commercial Pool." In the current era, there is no compelling justification for drawing such fine distinctions. In ITA's view, consolidation using the two-pool approach resolves this issue by eliminating the need for such distinctions.

users of these frequencies.⁷

second, the basic distinction between the Public Safety and Private Wireless classifications is relatively non-controversial and could be easily implemented. Beyond these two basic classifications, it becomes both difficult and futile to develop meaningful distinctions between different uses. There is some element of public safety inherent in virtually every "non-public safety" service.⁸ And virtually every "non-public safety" service has to comply with at least some degree of safety-related regulation at the federal, state and local levels. In such an environment, it is overly simplistic and erroneous to attempt to define a class of industrial or

⁷ The 800 and 900 MHz non-public safety private wireless frequencies are allocated in two pools, Business and Industrial/Land Transportation. In addition, there is a separate Public Safety pool for both bands.

⁸ To illustrate, under any consolidation proposal involving three or more pools, utility contractors would be relegated to the "Business/Commercial Pool" or its equivalent. Utility contractors, however, are exposed to the same dangers as construction and service personnel employed by power utility companies. Utility contractors engaged in underground installation or maintenance encounter a variety of dangerous soil conditions. The most unstable and inherently dangerous soil, termed "C soil," requires the use of protective walls at the excavation site. By comparison, "A soil" is inherently stable and does not require the use of protective walls. Utility contractors who find themselves installing water distribution systems in "C soil" could argue, with compelling validity, that they are engaged in a quasi-public safety activity. While the distinctions between "A soil" and "C soil" are helpful and necessary for purposes of environmental and workplace safety, such distinctions have no place in the Private Land Mobile Radio Services. In ITA's view, the only way for the Commission to avoid drawing such distinctions is to consolidate the Part 90 services into two pools, Public Safety and Private Wireless.

business users whose activities do not require the use of land mobile communications to protect the safety of life or property. Consolidation of the existing radio services into more than two pools would be incongruent with the overall objectives of the refarming proceeding.

third, it must be recognized that the consolidation of radio services into two pools will not endanger the health or safety of individuals engaged in quasi-public safety activities.⁹ There is no factual or rational basis to support those emotional arguments which suggest that implementation of two pools will aggravate the danger to which utility workers or the public are exposed. Professional frequency coordinators will always remain sensitive to the requirement to provide

⁹ The Affiliated American Railroads continue to argue, for example, that the Railroad Radio Service must be preserved as a distinct group of frequencies. The railroads argue that consolidation imposes an increased risk of co-channel and adjacent channel interference. Implicit in this view is the suggestion that unless a frequency coordinator is affiliated with the railroads, railroad systems will not be adequately protected. ITA respectfully disagrees with this view. Other coordinators, including ITA, have successfully coordinated railroad systems at 800 MHz and 900 MHz. Indeed, when AAR sought to construct and operate its proposed Advanced Train Control System on six frequency pairs in the 896-901/935-940 MHz band in 1987-1988, ITA coordinated these frequencies on behalf of the railroads. [See Order, adopted January 14, 1988, 3 FCC Rcd. 427 (1988).] It should be noted that, although AAR had requested an exclusive nationwide assignment of the Advanced Train Control channels, the Commission declined to grant this request. The Commission stated, "it is ... unnecessary for us to grant AAR exclusive use of the frequencies nationwide because there are areas where AAR will have no need for the frequencies." 3 FCC Rcd. 429. Instead, to accommodate AAR's needs, the Commission established an 80-mile protection zone around each site for which was licensed. *Id.*

sufficient protection for inherently dangerous operations.

fourth, in the vast majority of cases, users of radio systems are oblivious to the identity of the entity that provides their frequency coordinations. In most instances, it is the radio equipment dealers and service representatives who direct users to the appropriate coordinator. While frequency coordinators typically assert that they represent vast numbers of licensees and end users, as a practical matter, the identity and unique services offered by coordinators are often incidental to the end result. The environment is ripe for consolidation into two pools and for the introduction of competition between the certified frequency coordinators.¹⁰

B. The Commission Should Adopt Reasonable Provisions for Accommodating Low-Power Devices Required in the Health Professions.

Hewlett-Packard Company and SpaceLabs Medical argue that the Blueprint fails to provide adequate protection for the existing requirements and future needs of the hospitals and health care institutions that require low-power critical care medical telemetry devices. Hewlett-Packard comments that, under the Blueprint, except for itinerant use, low power

¹⁰ ITA believes that there are benefits to be derived from opening up all of the Private Land Mobile Radio frequencies to competitive coordination by any certified Part 90 coordinator, regardless of whether the frequencies are allocated to the Public Safety or Private Wireless Pool.

operations would be almost completely excluded from the former Business Radio Service offset channels at 450-470 MHz.¹¹

ITA agrees that the introduction of full-power operations on the 450-470 MHz offset channels requires a carefully managed transition process. By ITA's count, there were 282 offset channels previously available for Business Radio Service use under Section 90.267. ITA believes that it will be necessary, in the short term, to protect a portion of these channels from full-power operations. ITA notes, however, that the health care and hospital uses typically conducted on these low-power channels are intrinsically public safety in nature. Accordingly, ITA recommends that the Commission limit, for a three-year period, operations on a selected number of the Private Wireless Pool frequencies to low-power uses. Similarly, ITA believes that the Commission should designate an equal number of Public Safety Pool frequencies strictly for

¹¹ Hewlett-Packard's mention of the itinerant channels is a reference to the fact that the Blueprint identified twenty-five 12.5 kHz frequency pairs in the 450-470 MHz band for low-power itinerant operations. This proposal is embodied in frequency limitation #36 in the Blueprint. There is some question as to whether a limit of 5 watts or 2 watts would be appropriate for such frequencies. In its Supplemental Comments, Motorola notes that a task force of the Land Mobile Communications Council had proposed a maximum of 2 watts for these channels. ITA's Blueprint specified 5 watts. Motorola attributes the 5 watts recommended in the Blueprint to a "typographical error." As to the advisability of 5 watts or 2 watts, ITA defers to Motorola's judgment.

low-power operations, again for a three-year period.¹² ITA believes, however, that a long-term solution to the issues raised by Hewlett-Packard and SpaceLabs Medical requires the allocation of alternative spectrum to accommodate low-power operations. As a possible alternative, ITA recommends that the Commission examine the feasibility of allocating a portion of UHF-TV channel 37, located at 608-614 MHz, to accommodate low-power land mobile operations in the future.

C. **ITA Recommends A Minor Adjustment to the Current Rules Providing For Temporary/Conditional Permits.**

The Coalition of Industrial and Land Transportation Radio Users "strongly disagrees" with ITA's view that, after consolidation of the radio services, the certified frequency advisory committees would merely need to notify each other electronically once a coordination had been completed. The Coalition would prefer that all of the competing coordinators concur in the selection of a frequency before the subject application could be filed with the Commission.

ITA adheres to its view that, given the established

¹² ITA suggests that it would be appropriate to designate, for the three-year period, ten of the former low-power offset channel pairs encompassed with the Private Wireless Pool as available strictly for low-power use and ten of the former low-power offset channel pairs encompassed with the Public Safety Pool as available strictly for low-power uses. Existing full-power operations on the designated channels could be grandfathered.

experience and competence of the respective frequency coordinators, there is no need for prior concurrence. Simply stated, professional coordinators can be expected to coordinate frequencies in a professional manner. There may indeed be occasions when ITA or another certified coordinator will find it useful to consult with its applicant, incumbent licensees, and perhaps other coordinators before certifying a particular frequency for use. However, a mandatory concurrence process would significantly impede the processing of applications and undermine many of the benefits of the refarming proceeding.¹³ For this reason, ITA strongly urges the Commission to refrain from requiring inter-coordinator concurrence.

The Coalition expresses concern that, absent formal concurrence procedures, there will be "no possibility for objections or discussions about the efficacy of the frequency selection." ITA believes that an electronic notification process will provide ample opportunity for coordinators to advise incumbents, the processing frequency coordinator and, if necessary, the Commission of any objections to coordinations that appear to be defective. Certainly, with electronic

¹³ The Coalition states that, at a minimum, a competing coordinator should obtain concurrence from the "home" service coordinator. It seems intuitive, however, that with the consolidation of radio services, the concept of a "home" service coordinator becomes irrelevant. Indeed, if the benefits of competition in the coordination process are to be fully realized, users must have the opportunity to obtain coordination services from any one of the certified frequency coordinators. In such an environment, there will be no "home" service coordinators.

notification among coordinators, all coordinators will have advance notice of an individual application well before the Commission considers the application for grant.

ITA agrees, however, that the current temporary and conditional licensing procedures set forth in Section 90.159 may raise the potential for unintended interference to existing systems. Under Section 90.159(b), an applicant for a new or modified station below 470 MHz may begin operations, under certain specified safeguards, once its application has been certified by a frequency coordinator. In cases where applicants choose to take advantage of these provisions for conditional operation, the FCC will not have had time for formal review of the subject application in advance of station operations. In ITA's view, the risk of harmful or illegal transmissions by applicants operating under conditional permits is not substantial. However, to preclude any such transmissions and alleviate the concerns of the Coalition in this regard, ITA recommends that the Commission take action to amend Section 90.159. To allow the inter-coordinator notification process to achieve its intended effect, the Commission could simply amend the conditional operating provisions in this section to institute a mandatory waiting period of 10 business days before any applicant for a new or modified radio system below 470 MHz begins operating pursuant to conditional permit. With implementation of this suggested

change, there would be a defined period of time for all certified frequency coordinators to express any disagreements on a coordination to the Commission. In turn, the 10-day period would relieve a burden on the Commission by facilitating early resolution of a potential difficulty -- in advance of the date on which an applicant commenced operations. The Commission would also have the ability to defer or suspend conditional operating privileges for any individual applications that appeared to pose unique difficulties.

D. If the Refarming Proceeding Is To Prove Successful, the Commission Must Mandate Some Minimum Level of Operating Discipline Among All Licensees.

As noted in the comments of various parties, the Blueprint does not accommodate all of the needs articulated by all of the interested parties. For example, in the best of all worlds, it would be desirable to preserve, for low-power operations, all of the 282 Business Radio Service frequencies available for offset operations under the former Section 90.267. This outcome is not realistic. Consequently, it will be incumbent on producers of equipment and perhaps hospitals and other users of low-power devices to be cognizant of the need to exercise spectrum discipline. Of necessity, past operating practices may have to be altered to adjust to the post-refarming environment -- at least until a specific allocation of new spectrum can be implemented for generic low-power operations.

Similarly, ITA believes that the railroad industry will necessarily have to implement spectrum discipline. The Affiliated American Railroads ("AAR") faults the Blueprint for its failure to account for the interference effects of normal, line of sight propagation. AAR observes that the interfering signals of non-railroad users could travel much further than 50 miles. This being the case, AAR states, ITA's proposal for a 50-mile protection zone for railroad mobile radio systems would be inadequate.

According to examples cited by AAR, there are instances where even a 135-mile protection zone would be inadequate to provide interference-free operations for the railroads. In this regard, ITA notes that, in the 800 MHz band, even stations operating from the highest mountain peaks in the State of California are entitled to a protected zone of only 105 miles. The conclusion that ITA necessarily draws from AAR's examples is that, like other entities, the railroads may in some circumstances find it necessary to exhibit an enhanced level of spectrum discipline to conform to the post-refarming environment.

ITA does not believe it is practical for any one user of the refarmed spectrum to expect protection at radii of 135 miles from its station location. Accordingly, in selected cases, it may be necessary for the Commission to adopt a two-

pronged approach to problem situations: (1) to insist that affected users conform to the new technical environment; and (2) to examine opportunities for specifically tailored new allocations of spectrum, such as the of UHF-TV channel 37, in those unique cases where conformance to the Blueprint imposes a potentially untenable situation.

E. ITA Requests Commission Endorsement of Its Preferred Approach for Coordinating 25 kHz New Technology Systems.

In its Blueprint, ITA did not address the circumstances presented by existing licensees who desire to implement state-of-the-art technology systems on their established 25 kHz assignment. Clearly, the Commission intends to permit such operations, as evidenced by the type acceptance standards for 25 kHz equipment contained in the new Section 90.203(j)(2)(iii) and (j)(3).

With respect to applications for 25 kHz operations that conform to the efficiency standard contained in Section 90.203(j)(3), there remains questions as to the most efficient approach for coordinating and licensing such systems.

In consideration of the needs of the applicants and with the intent of preserving the integrity of the narrowband channel plan, ITA anticipates coordinating requests for 25 kHz systems as follows: ITA would permit the licensee to retain

its existing center frequency to serve as the center frequency for the proposed 25 kHz new technology system. Assuming the risk of interference to adjacent channel operations was within acceptable limits, ITA would then coordinate the application so as to grant the licensee the two 12.5 kHz assignments on both the "high" and "low" sides of the identified center frequency.

ITA's objective would be to promote consistency with the existing band plan and avoid causing interference to existing systems. ITA believes this is the preferred approach for coordinating proposed 25 kHz "new technology" systems and requests Commission endorsement of this approach.

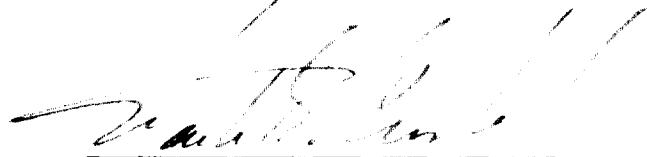
F. The Commission Should Implement Useful Technical Refinements In the Blueprint Suggested by Various Commenters.

Having reviewed all the specific technical refinements suggested by the commenters, ITA believes there are several desirable changes to the Blueprint that have been identified by various commenters. ITA recognizes the validity of the technical refinements in the frequency limitations suggested by, among others, ARINC, PCIA, and the Alarm Industry Communications Committee. ITA trusts that the Commission will examine the limitation refinements suggested by these and other parties, with the hope of implementing those suggestions that

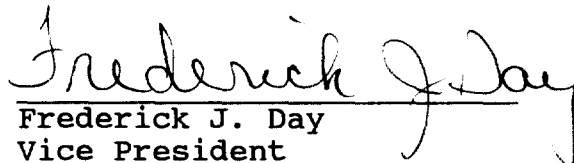
are not inconsistent with the fundamental thrust of the
Blueprint.

Respectfully submitted,

INDUSTRIAL TELECOMMUNICATIONS
ASSOCIATION, INC.

A handwritten signature in dark ink, appearing to read "Mark E. Crosby", written over a horizontal line.

Mark E. Crosby
President and CEO

A handwritten signature in dark ink, appearing to read "Frederick J. Day", written over a horizontal line.

Frederick J. Day
Vice President
Government Relations

Date: February 12, 1997